aiwa SERVICE

HS-RX837

DAH1

SERVICE MANUAL

STEREO RADIO CASSETTE PLAYER BASIC TAPE MECHANISM : 6ZM-2P6

SPECIFICATIONS

Frequency range:	
Reception area "EU"	AM 531 – 1,602 kHz (9 kHz steps) FM1, FM2 87.5 – 108 MHz (50 kHz steps)
Reception area "USA"	AM 530 – 1,710 kHz (10 kHz steps) FM1, FM2 87.5 – 108.1 MHz (200 kHz steps)
Reception area "JPN"	AM 531 – 1,629 kHz (9 kHz steps) FM1, FM2 76 – 108 MHz (100 kHz step in 76 – 90 MHz, 50 kHz step in 90 – 108 MHz)
Maximum output:	4 mW + 4 mW (EIAJ 32 ohms)
Power sources:	DC 1.2 V using supplied rechargeable battery NB-5G DC 1.5 V using an R6 (size AA) dry cell battery AC house current using the optional AC adaptor
Maximum dimensions:	109.4 (W) × 79 (H) × 27.1 (D) mm (4 3/8 × 3 1/8 × 1 1/8 in.)
Weight:	Approx. 146 g (5.1 oz.) excluding batteries

<Battery charger RB-107 H>

Rated voltage:	AC115 V/230 V, 50/60 Hz

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ◨◧ are trademarks of Dolby Laboratories Licensing Corporation.

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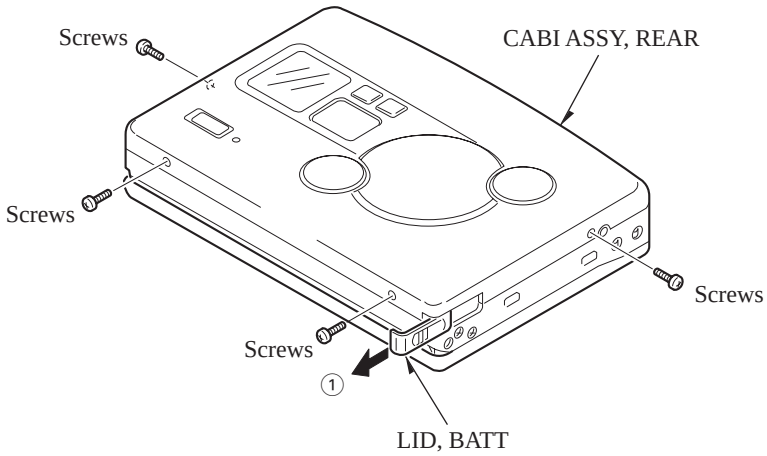
S/M Code No. 09-986-269-8O2

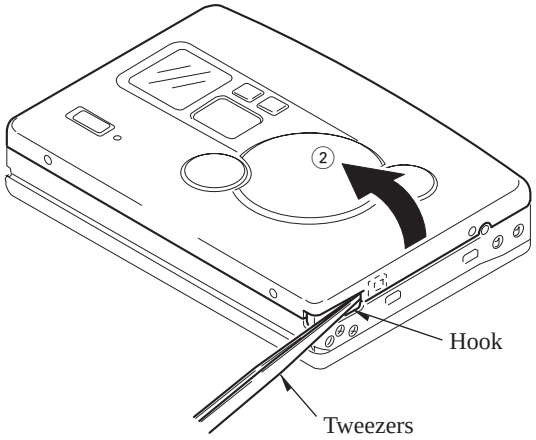
DATA

DISASSEMBLY INSTRUCTIONS

1. “REAR, CABINET” Removal

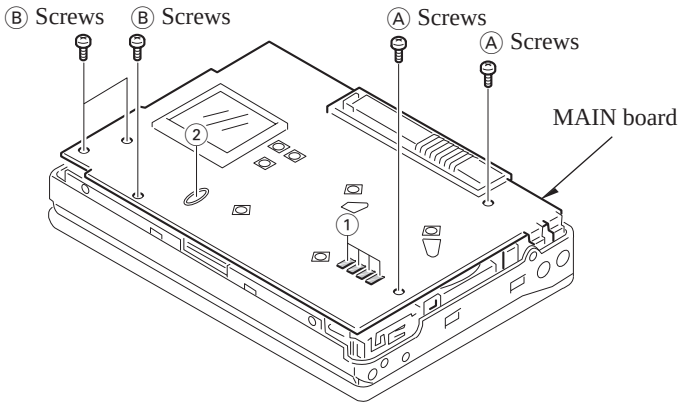
1) Remove the battery lid. (①)
2) Remove the four screws.
3) Insert tweezers or like into the gap of the battery insertion slot as shown, and remove the hook.
4) Remove the cabinet assembly in the direction of the arrow (②).





2. “MAIN BOARD” Removal

1) Remove three screws Ⓐ.
2) Remove the two screws Ⓑ, and remove the headphones jack.
3) Remove soldering of the motor terminal. (①)
4) Remove soldering of the battery terminal (-) (②).



CAUTION WHEN SERVICING

The motor terminals are directly soldered to C.B. (Printed Circuit Board) so that the unit cannot be checked of its operations when the MAIN C.B. is opened during repair.
In order to check operations of the unit with the MAIN C.B. opened, use the jig (for 6ZM-2).

Part name: JIG KIT 6ZM-2 Part No.: SV-J00-016-010

1) How to assemble the jig
   Assemble the jig referring to Fig-1.
   ① Separate the supplied two 6P flat cables, and fabricate the one 3P wire, the two 2P wires and the one 1P wire.
   ② Attach the photo sensor to the jig C.B. by soldering.
   (Refer to Fig-1 and indication on the jig C.B. for the direction of attaching the photo sensor.)
   ③ Attach the outside terminal of the timing switch to the jig C.B. with soldering.
   (At this time, do not solder the timing switch to the motor terminal land.)
   ④ Connect the other terminal of the timing switch to the GND terminal of the jig C.B. using a wire.
   ⑤ Connect the wire that are separated in step ① by soldering, to the jig C.B. as shown in Fig-1.

2) How to attach the jig
   Attach the jig referring to Fig-2.
   ① Fix the jig C.B. to the mechanism using the MAIN C.B. fixing screws.
   ② Solder the motor terminal.
   ③ Connect the wire A of the jig C.B. to the motor terminal of the MAIN C.B. by soldering. (Refer to Fig-3.)
   ④ Connect the sire B of the jig C.B. to the timing switch terminal of the MAIN C.B. by soldering. (Refer to Fig-3.)
   ⑤ Connect the wire C of the jig C.B. to (+) and (-) terminals of battery by soldering. (Refer to Fig-3.)
   ⑥ Connect the wire D of the jig C.B. to photo sensor of the MAIN C.B. by soldering. (Refer to Fig-3.)

3) How to use the jig
   When the C.B.s (printed circuit boards) are opened, the respective switches on the C.B.s are located on the rear side.
   Perform all operations from a remote controller in order to increase the work efficiently as follows.
   ① Connect a remote controller.
   ② Short circuit the cassette switch terminals with wires or the like.

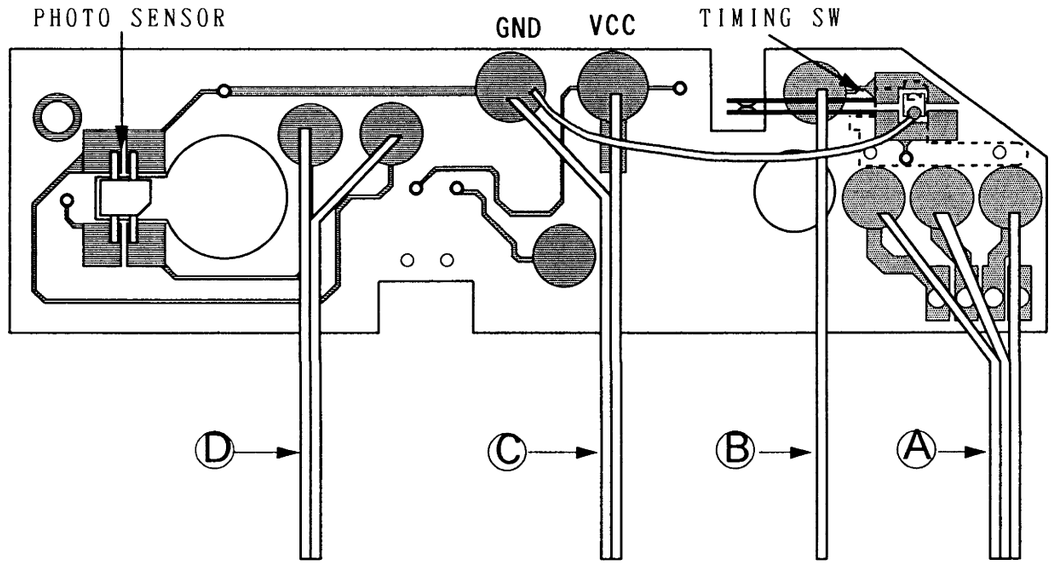


Fig-1

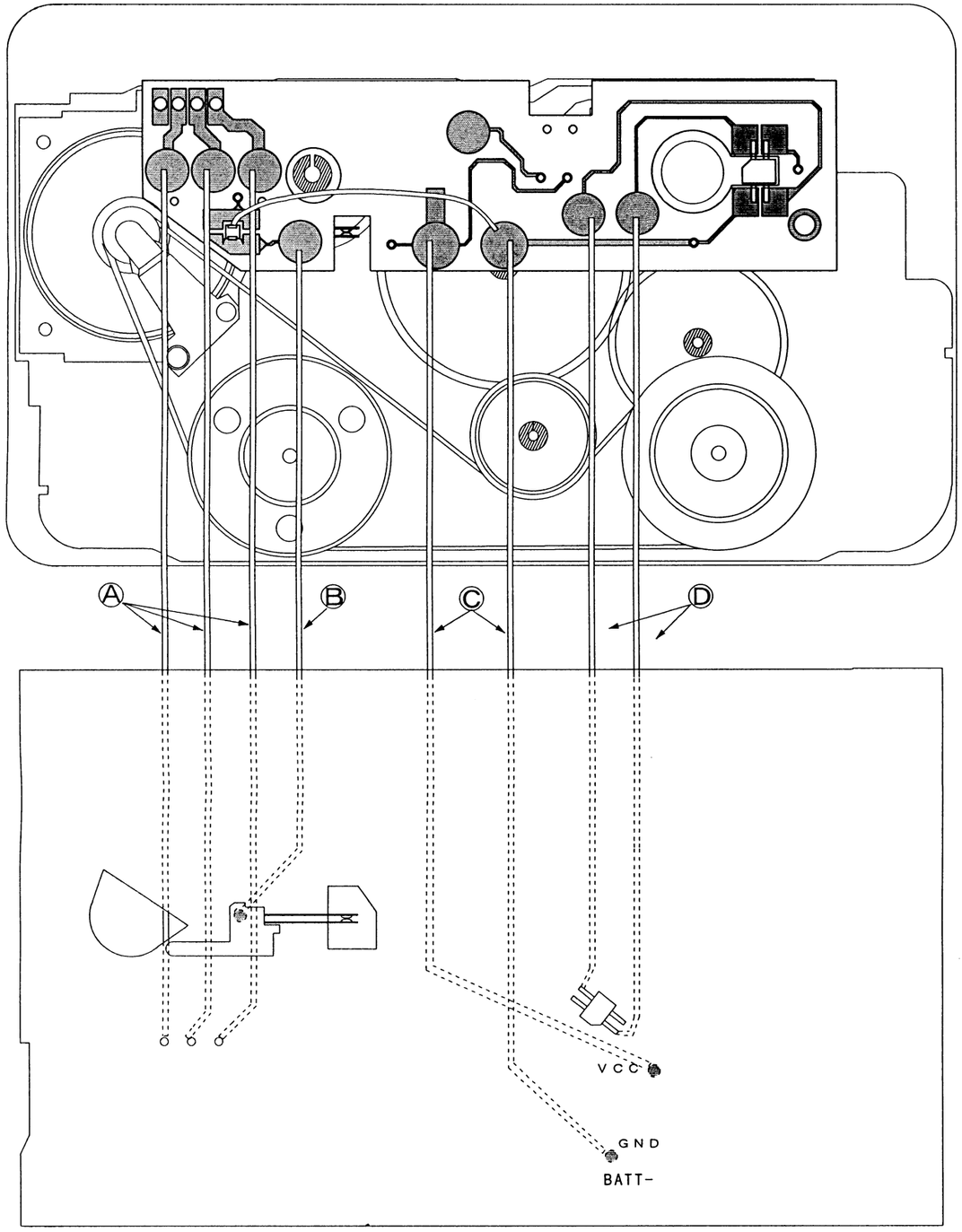


Fig-2

Fig-3

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-441-010		C-IC,BA3632K
	87-A20-745-040		C-IC,TA2030FN
	87-A20-076-040		C-IC,TA2022AFN
	87-A20-124-080		IC, TK11823
	87-002-406-040		C-IC,TPIC326ADB
	87-A20-818-040		C-IC,NJM2185AV
	87-A20-880-010		C-IC,TC9327F-013
	87-A20-755-080		C-IC,AK93C45AF
	87-A20-757-040		C-IC,S-80815ANNP-EDC-T2
	87-A20-902-040		C-IC,S-80809ANNP-E7Z-T2
	87-A20-603-040		C-IC,RN5RK241A
TRANSISTOR			
	89-508-804-080		CHIP FET 2SK880Y
	87-026-352-080		CHIP-TR,DTC144TU
	87-026-476-080		TR,RN1610
	87-026-349-080		CHIP TRANSISTOR DTC143TU
	89-113-625-080		TR,2SA1362GR(120MHZ,0.
	87-026-648-080		C-TR,UPA608T
	87-026-467-080		TR,HN1C01F (0.3W)
	87-026-597-080		C-TR,UMH3
	87-026-480-080		TR,RN4605 (0.3W)
	89-341-165-080		CHIP TRANSISTOR 2SC4116GR
	87-026-534-080		C-TR,RN4905
	89-342-153-080		TR,2SC4215
	89-508-814-080		C-FET 2SK881 Y
	87-026-417-080		TR,RN1310
	87-026-425-080		C-TR,RN2307
	87-026-428-080		TR,RN2310 (0.1W)
	89-342-132-080		TR,2SC4213
	87-026-481-080		TR,RN4607 (0.3W)
DIODE			
	87-001-166-080		DIODE,1SS301
	87-001-553-080		C-DIODE 1SS322
MAIN C.B			
BPF201	81-HW1-628-080		CHIP BAND PASE FILTER
C100	87-010-853-080		C-CAP,220-4V H5.5
C101	87-012-272-080		C-CAP,U 680P-50 B
C102	87-012-272-080		C-CAP,U 680P-50 B
C103	87-012-272-080		C-CAP,U 680P-50 B
C104	87-012-272-080		C-CAP,U 680P-50 B
C105	87-016-117-080		C-CAP,U 0.018-25 J B
C106	87-016-117-080		C-CAP,U 0.018-25 J B
C107	87-016-296-080		C-CAP,TN 22-4SV(A)
C108	87-016-296-080		C-CAP,TN 22-4SV(A)
C109	87-010-828-080		CHIP CAPACITOR,U 0.033-25F
C110	87-010-828-080		CHIP CAPACITOR,U 0.033-25F
C111	87-A10-262-080		C-CAP,U 1-10 ZF
C112	87-A10-262-080		C-CAP,U 1-10 ZF
C113	87-016-462-080		C-CAP,S 1-16 F
C114	87-016-462-080		C-CAP,S 1-16 F
C115	87-012-272-080		C-CAP,U 680P-50 B
C116	87-012-272-080		C-CAP,U 680P-50 B
C117	87-A10-262-080		C-CAP,U 1-10 ZF
C118	87-A10-262-080		C-CAP,U 1-10 ZF
C119	87-A10-263-080		C-CAP,U 0.1-16ZF
C120	87-A10-263-080		C-CAP,U 0.1-16ZF
C121	87-010-674-080		CAP, ELECT 220-2
C122	87-010-674-080		CAP, ELECT 220-2
C123	87-010-851-080		C-CAP,47-4
C124	87-A10-262-080		C-CAP,U 1-10 ZF
C125	87-016-296-080		C-CAP,TN 22-4SV(A)
C126	87-010-829-080		CAP, U 0.047-16
C127	87-A10-353-080		C-CAP,U0.22-10KB
C128	87-010-424-080		CAPACTOR,TANTAL 4.7-4
C129	87-A10-260-080		C-CAP,U 0.1-16 K B
C130	87-010-851-080		C-CAP,47-4
C131	87-A10-263-080		C-CAP,U 0.1-16ZF
C132	87-016-317-080		C-CAP,TN 2.2-6.3
C133	87-A10-263-080		C-CAP,U 0.1-16ZF
C134	87-010-274-080		C-CAP,TN 3.3-4
C135	87-010-851-080		C-CAP,47-4
C140	87-016-296-080		C-CAP,TN 22-4SV(A)
C141	87-A10-263-080		C-CAP,U 0.1-16ZF
C142	87-A10-263-080		C-CAP,U 0.1-16ZF
C143	87-012-273-080		C-CAP,U 820P-50 B
C144	87-A10-263-080		C-CAP,U 0.1-16ZF
C145	87-010-787-080		CAP, U 0.022-25
C146	87-A10-262-080		C-CAP,U 1-10 ZF
C147	87-A10-262-080		C-CAP,U 1-10 ZF
C150	87-016-462-080		C-CAP,S 1-16 F
C151	87-A10-263-080		C-CAP,U 0.1-16ZF
C152	87-012-282-080		CAP, U 4700P-50
C153	87-012-282-080		CAP, U 4700P-50
C200	87-A10-262-080		C-CAP,U 1-10 ZF
C201	87-010-197-080		CAP, CHIP 0.01 DM
C202	87-010-986-080		C-CAP,S 820P-50 J CH
C203	87-A10-031-080		C-CAP,U 0.01-25 KB
C204	87-012-155-080		C-CAP 180P-50CH
C205	87-A10-031-080		C-CAP,U 0.01-25 KB
C206	87-012-168-080		C-CAP,U 6P-50 CH
C207	87-012-160-080		C-CAP,U 50P-50 CK
C208	87-A10-030-080		C-CAP,U 100P-50 CH
C209	87-012-193-080		C-CAP,U 82P-50 CH
C210	87-010-746-080		CAP, TANTAL 10-4
C211	87-012-199-080		CAP 220P
C214	87-012-275-080		C-CAP,U 1200P-50 B
C215	87-A10-263-080		C-CAP,U 0.1-16ZF
C216	87-A10-031-080		C-CAP,U 0.01-25 KB
C251	87-A10-703-080		C-CAP,TN 47-2.5 M A
C252	87-A10-031-080		C-CAP,U 0.01-25 KB
C254	87-A10-031-080		C-CAP,U 0.01-25 KB
C257	87-A10-263-080		C-CAP,U 0.1-16ZF
C258	87-012-282-080		CAP, U 4700P-50
C259	87-012-172-080		CAPACITOR CHIP U 10P CH
C260	87-012-140-080		CAP 470P
C261	87-012-193-080		C-CAP,U 82P-50 CH
C262	87-010-336-080		C-CAP,S 18P-50 UJ
C263	87-010-787-080		CAP, U 0.022-25
C264	87-012-274-080		CHIP CAP,U 1000P-50B
C265	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C266	87-A10-263-080		C-CAP,U 0.1-16ZF
C267	87-A10-264-080		C-CAP,S 0.1-16ZF
C268	87-A10-263-080		C-CAP,U 0.1-16ZF
C269	87-010-177-080		C-CAP,S 820P-50 SL
C270	87-A10-031-080		C-CAP,U 0.01-25 KB
C271	87-A10-703-080		C-CAP,TN 47-2.5 M A
C272	87-A10-262-080		C-CAP,U 1-10 ZF
C273	87-010-746-080		CAP, TANTAL 10-4
C274	87-012-274-080		CHIP CAP,U 1000P-50B
C275	87-012-282-080		CAP, U 4700P-50
C276	87-012-349-080		C-CAP,S 1000P-50 CH
C277	87-010-829-080		CAP, U 0.047-16
C278	87-012-270-080		CAP, U 470P-50
C279	87-A10-031-080		C-CAP,U 0.01-25 KB
C280	87-A10-031-080		C-CAP,U 0.01-25 KB
C281	87-010-829-080		CAP, U 0.047-16
C282	87-010-829-080		CAP, U 0.047-16
C284	87-012-188-080		C-CAP,U 47P-50 CH
C286	87-A10-263-080		C-CAP,U 0.1-16ZF
C287	87-010-787-080		CAP, U 0.022-25
C288	87-A10-263-080		C-CAP,U 0.1-16ZF
C301	87-010-787-080		CAP, U 0.022-25
C302	87-010-505-080		CA, CHIP TANTALUM 1-16
C304	87-A10-703-080		C-CAP,TN 47-2.5 M A
C305	87-010-196-080		CHIP CAPACITOR,0.1-25
C306	87-012-167-080		C-CAP,U 5P-50 CH
C307	87-012-169-080		C-CAP,U 7P-50 D CH
C308	87-012-188-080		C-CAP,U 47P-50 CH
C309	87-A10-263-080		C-CAP,U 0.1-16ZF
C401	87-010-504-080		CAP, CHIP TANTALUM 0.47-25
C402	87-A10-263-080		C-CAP,U 0.1-16ZF
C404	87-010-829-080		CAP, U 0.047-16
C405	87-A10-263-080		C-CAP,U 0.1-16ZF
C406	87-010-486-080		C-CAP,TN 0.33-50
C407	87-010-829-080		CAP, U 0.047-16
C408	86-HR4-615-080		C-CAP,TN 0.47-25(AW)
C409	87-012-358-080		C-CAP,S 0.47-10 F Z
C412	87-010-424-080		CAPACTOR,TANTAL 4.7-4
C501	87-012-274-080		CHIP CAP,U 1000P-50B
C502	87-010-746-080		CAP, TANTAL 10-4
C503	87-016-526-080		C-CAP,S 0.47-16 BK
C504	87-016-526-080		C-CAP,S 0.47-16 BK
C505	87-A10-353-080		C-CAP,U0.22-10KB
C506	87-A10-353-080		C-CAP,U0.22-10KB
C601	87-010-829-080		CAP, U 0.047-16
C602	87-A10-031-080		C-CAP,U 0.01-25 KB
C603	87-016-296-080		C-CAP,TN 22-4SV(A)
C604	87-A10-263-080		C-CAP,U 0.1-16ZF
C605	87-012-176-080		CAP 15P
C606	87-012-176-080		CAP 15P
C607	87-A10-025-080		C-CAP,U 0.22-16Z F
C608	87-A10-263-080		C-CAP,U 0.1-16ZF
C609	87-A10-263-080		C-CAP,U 0.1-16ZF
C610	87-A10-263-080		C-CAP,U 0.1-16ZF
CF251	87-A90-291-080		C-FLTR,KMFC5132AE-TC
CF254	87-A90-456-080		C-FLTR,PFWCC 450J3
J101	85-HK3-605-010		JACK,DIA3.5 ST 5P
L101	87-003-240-080		C-COIL,S 3.3UH
L102	87-003-240-080		C-COIL,S 3.3UH
L103	87-003-240-080		C-COIL,S 3.3UH
L104	87-003-234-080		C-COIL,S,0.22UH
L105	87-003-240-080		C-COIL,S 3.3UH
L107	87-003-246-080		C-COIL,33UH
L108	87-003-240-080		C-COIL,S 3.3UH
L109	87-003-240-080		C-COIL,S 3.3UH
L110	87-003-240-080		C-COIL,S 3.3UH
L201	81-HJ1-623-080		COIL,FM RF Y(R)
L202	81-HJ1-622-080		COIL,FM OSC Y(R)
L203	87-005-564-080		CHIP-COIL S2.2MH
L251	88-HR5-605-010		BAR-ANT,MW(C)
L252	87-003-247-080		C-COIL,100UH
L253	87-005-788-080		C-IFT,AM (450K)
L254	87-003-246-080		C-COIL,33UH
L301	87-A50-037-080		C-COIL,D-D 5CDLU
L601	87-003-246-080		C-COIL,33UH
LCD601	88-HR3-604-010		LCD,AIW4137(8HR-3)
LED161	87-A90-278-080		C-LED,SML-210VT RED
PS171	87-A90-440-010		SNSR,PHOTO GP2S24N2-
R103	87-022-432-080		C-RES,U 270-1/16W F
R104	87-022-432-080		C-RES,U 270-1/16W F
R105	87-022-437-080		C-RES,U 430-1/16W F
R106	87-022-437-080		C-RES,U 430-1/16W F
R401	87-022-043-080		RESISTOR, 1/8W 8.2K
R407	87-022-043-080		RESISTOR, 1/8W 8.2K
R501	87-022-252-080		C-RES,U36K-1/16WF
R611	87-022-245-080		C-RES U 18K-1/16WF
R612	87-022-245-080		C-RES U 18K-1/16WF
R613	87-022-223-080		CHIP RES 2.2K 1/16W F
R614	87-022-223-080		CHIP RES 2.2K 1/16W F
R615	87-022-223-080		CHIP RES 2.2K 1/16W F
R616	87-022-227-080		C-RES,U 3.3K-1/16W F
R617	87-022-227-080		C-RES,U 3.3K-1/16W F
S601	87-A90-665-080		C-SW,TACT LS7A2M
S602	87-A90-665-080		C-SW,TACT LS7A2M
S603	87-A90-665-080		C-SW,TACT LS7A2M
S604	87-A90-665-080		C-SW,TACT LS7A2M
S605	87-A90-665-080		C-SW,TACT LS7A2M
S606	87-A90-665-080		C-SW,TACT LS7A2M
S607	87-A90-665-080		C-SW,TACT LS7A2M
S608	87-036-428-180		C-SW,SL 1-1-2 SSQ
S609	87-A90-361-010		SW,PUSH SPPB51-H11.3
S610	87-A90-356-110		SW,LEAF 6ZM-2
S611	87-A90-004-080		C-SW,SL1-1-3 MHT(NC)
SFR251	87-A90-027-080		C-SFR,22K H CVR-32
SFR401	87-A90-104-080		C-SFR,6.8K H CVR-32
TC202	87-011-192-080		CHIP TRIMER
TC251	87-011-189-080		TRIMMER CHIP CTZ-10A
VC201	87-001-708-080		C-DIODE ISV228
VC202	87-001-708-080		C-DIODE ISV228
VC251	87-A40-462-040		C-VARI-CAP,SVC347(S)
VR101	87-A90-342-080		C-VR,RTRY 50KCX2 V XV0103
X601	87-A70-064-010		VIB,XTAL 75KHZ VTC-200
D.D C.B			
C702	87-016-296-080		C-CAP,TN 22-4SV(A)
C703	87-016-563-080		C-CAP,TN 10-10 SV A
C704	87-016-462-080		C-CAP,S 1-16 F
C705	87-016-296-080		C-CAP,TN 22-4SV(A)
L701	87-A50-011-080		C-COIL,47UH LQH3C
L702	87-A50-174-080		C-COIL, 82UH 7004-2
L703	87-003-246-080		C-COIL,33UH
HEAD FLEX C.B			
PH	88-HK5-602-010		HEAD ASSY 6ZM-2(P5)

- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding

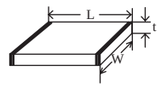
8 8 – □ □ □ □ □ □

A
抵抗部品コード
Resistor Code

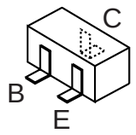
桁表示
Figure

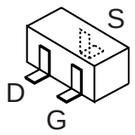
抵抗値
Value of resistor

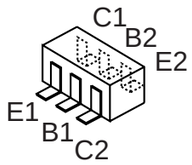
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード ：A Resistor Code ：A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION

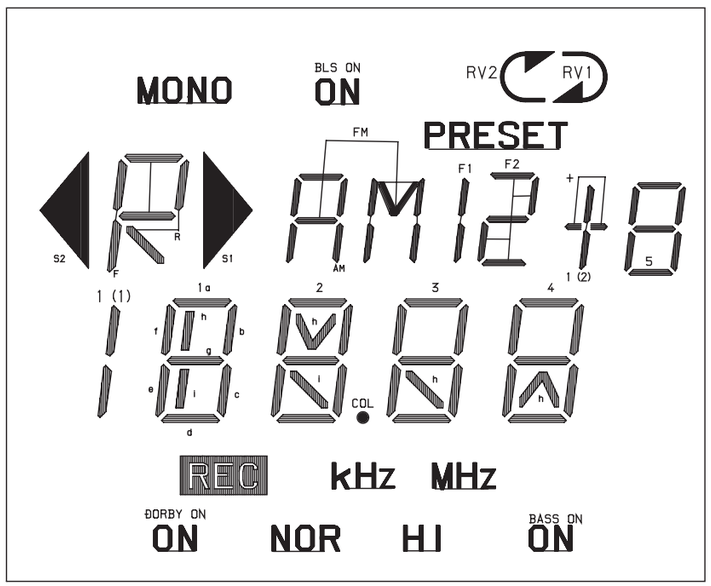






2SA1362GR	DTC143TU	2SK880Y	HN1C01F	RN4607
2SC4116GR	DTC144TU	2SK881Y	HN1C01FGR	RN4905
2SC4213	RN1310		RN1610	UMH3
2SC4213B	RN2307		RN4605	UPA608T
2SC4215	RN2310			
2SC4215O				

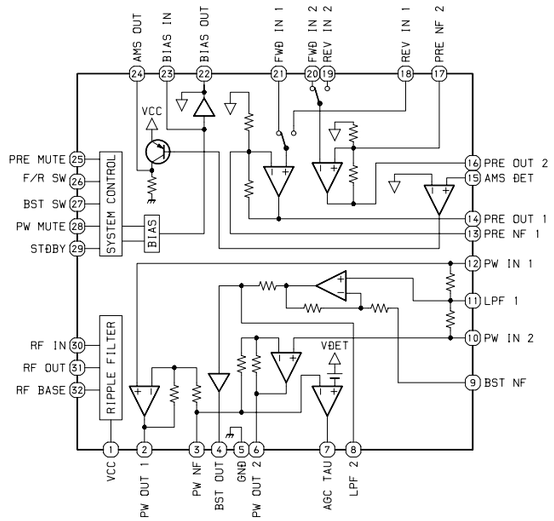
LCD DISPLAY



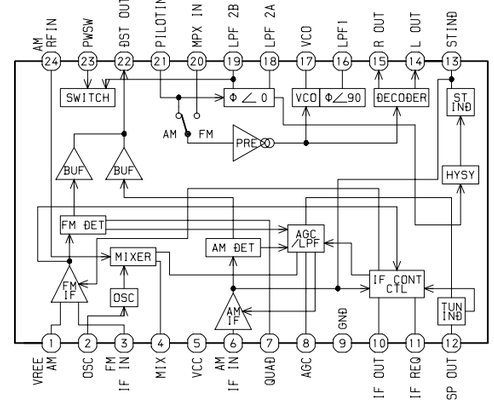
PinNo	COM1	COM2	COM3	COM4
1	COM1	——	——	——
2	——	COM2	——	——
3	——	——	COM3	——
4	——	——	——	COM4
5	5a	5b	5c	5g
6	——	4c	4b	5d
7	4d	4h	4g	4a
8	BASS ON	4e	4f	5e
9	MHz	3b	1 (2)	5f
10	3c	3g	3a	+
11	3d	3h	——	——
12	KHz	3e	3f	PRESET
13	COL	2c	2b	HI
14	2d	2i	2g	NOR
15	ÐOLBY ON	2e	2f	2h
16	REC	1c	1b	2a
17	1d	1i	1g	1h
18	1 (1)	1e	1f	1a
19	F	R	AM	F2
20	S2	S1	FM	F1
21	MONO	BLS ON	RV2	RV1

IC BLOCK DIAGRAM

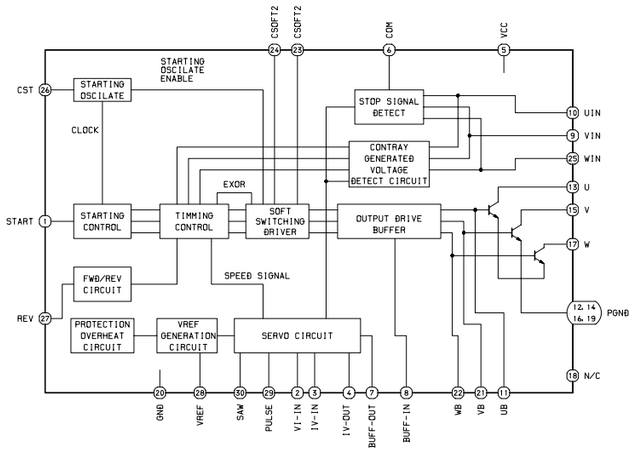
IC, BA3632K



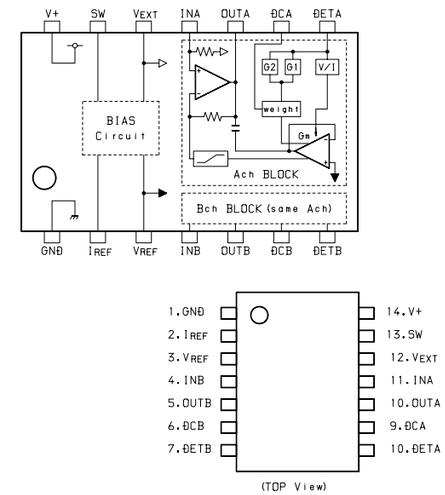
IC, TA2022FN



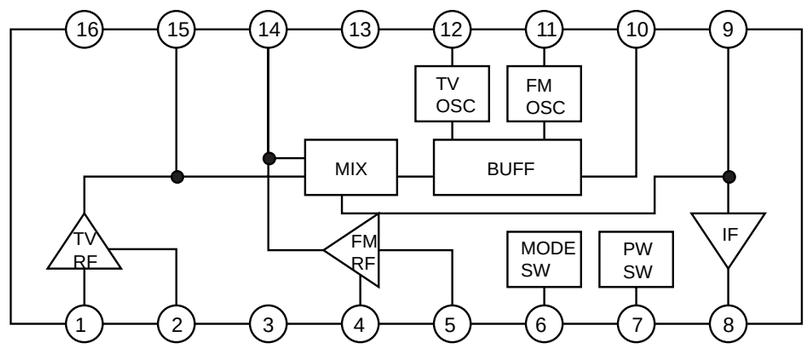
IC, TPIC326ADB

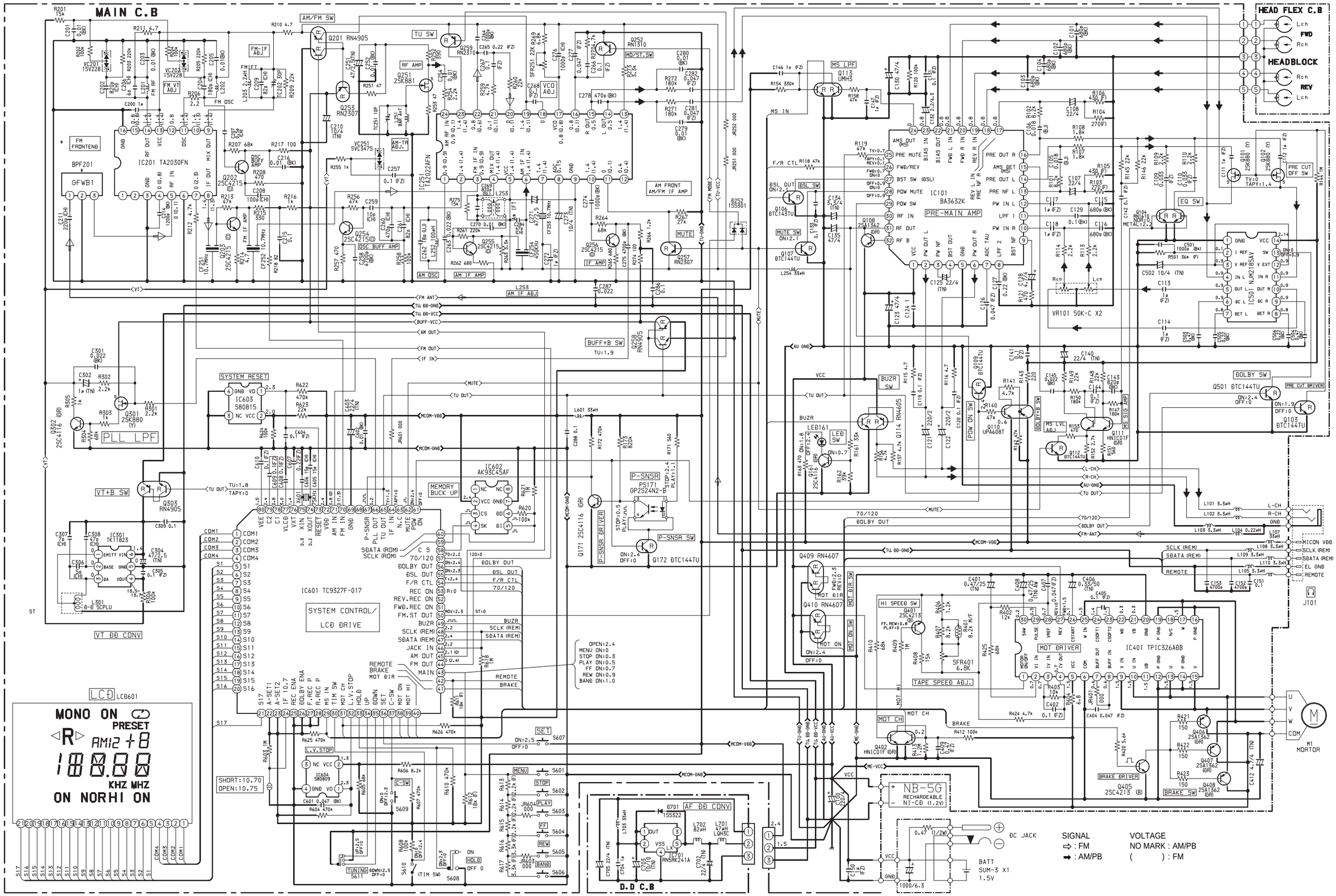


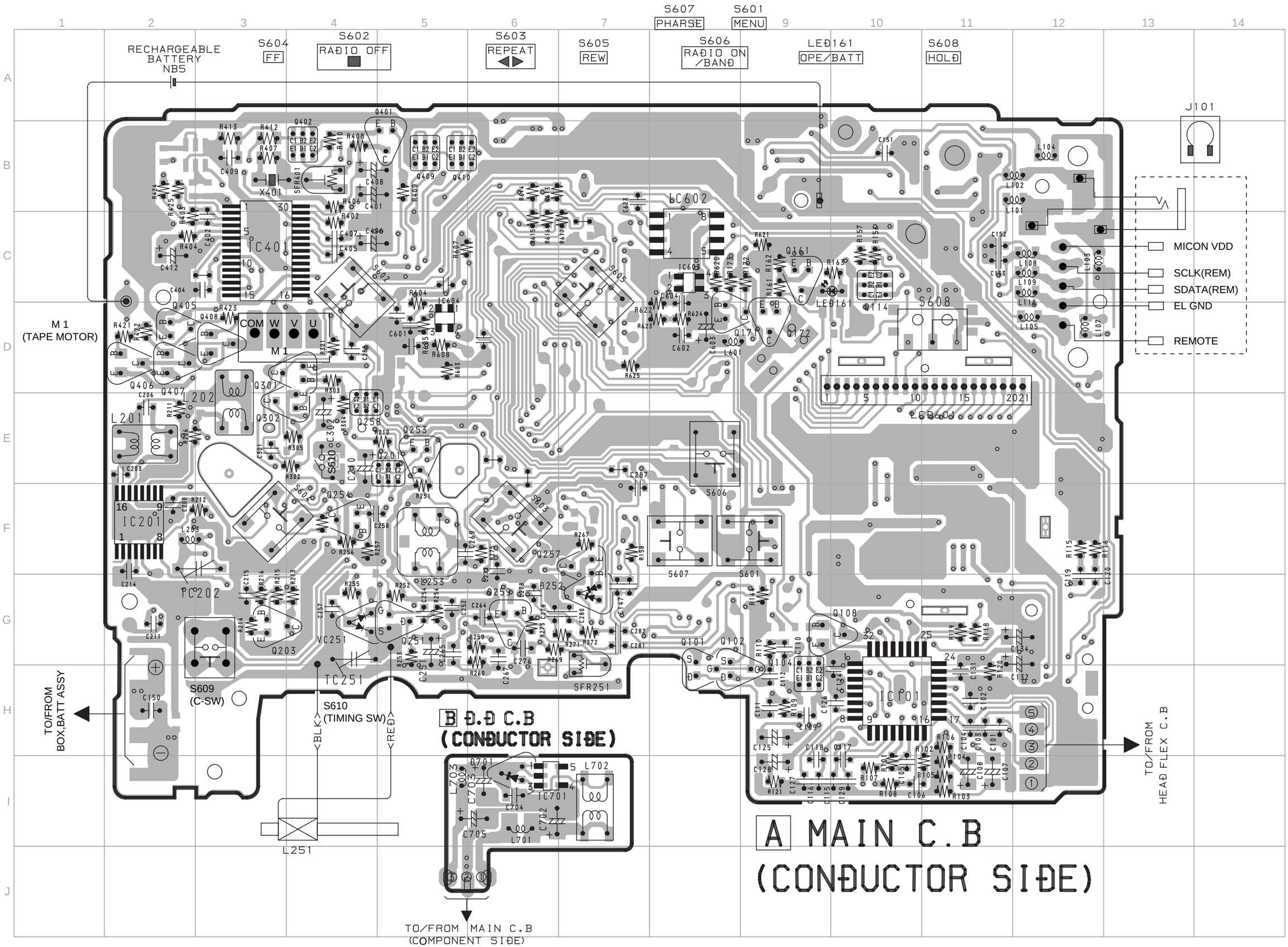
IC, NJM2185AV



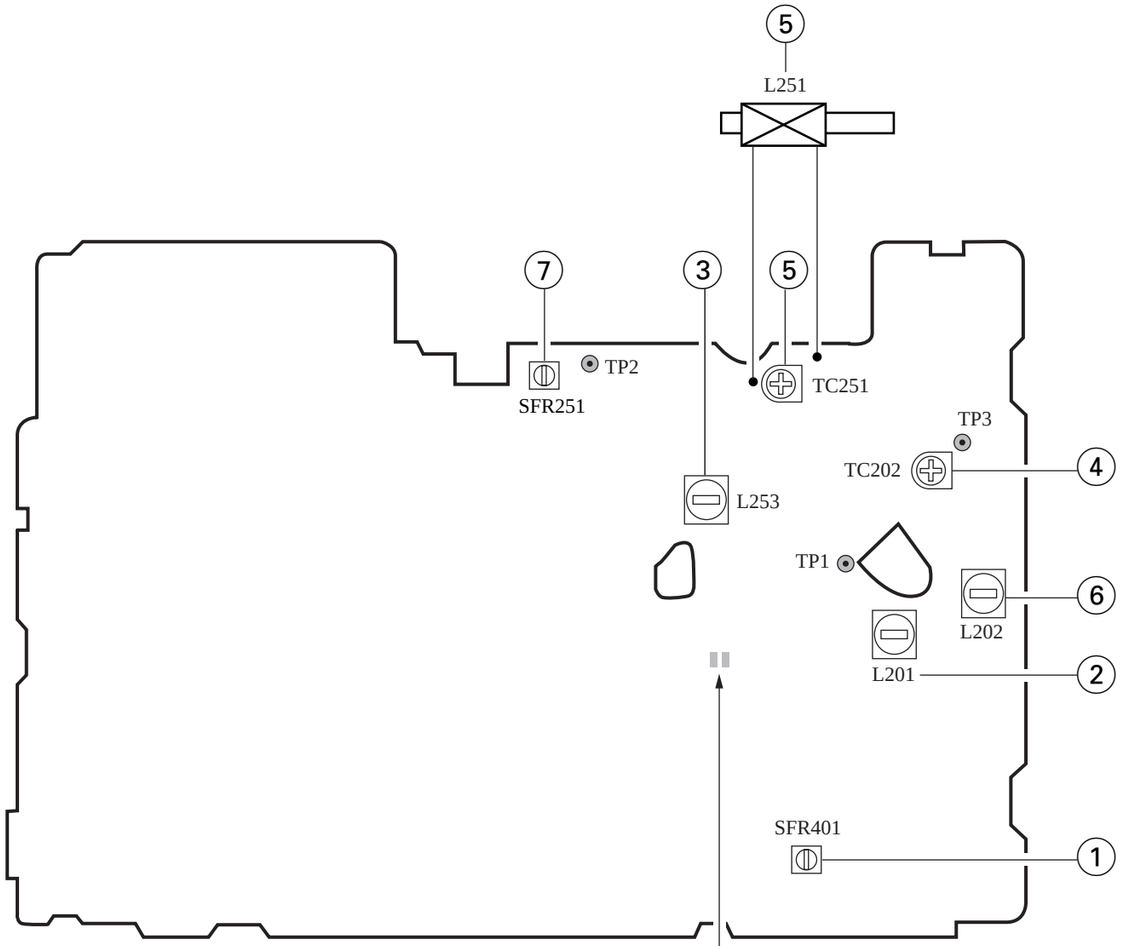
IC, TA2030FN




MAIN C.B
HEAD FLEX C.B
Lch
FWD
Rch
HEADBLOCK
Rch
REV
Lch
IC201 TA2030FN
IC251 TA2022AFN
IC101 BA3632K
PRE-MAIN AMP
IC501 NJM2185AV
IC602 AK93C45AF
IC603 S80815
IC604 S80809
IC601 TC9327F-017
SYSTEM CONTROL/ LCD DRIVE
IC401 TPIC326ABB
MOT DRIVER
AM FRONT AM/FM IF AMP
PLL LPF
VT+B SW
VT ÐÐ CONV
D.D C.B
AF ÐÐ CONV
BUFF+B SW
MUTE
EQ SW
ÐOLBY SW
PRE CUT OFF SW
PRE CUT DRIVER
BRAKE SW
BRAKE DRIVER
HI SPEED SW
TAPE SPEED ADJ.
MOT CH
MOT DIR SW
MOT ON SW
MEMORY BUCK UP
P-SNSR
P-SNSR SW
P-SNSR DRIVER
AM OSC
AM IF AMP
OSC BUFF AMP
IF AMP
MS LPF
MS IN
F/R CTL
ÐSL SW
MUTE SW
LED SW
BUZR SW
PDW ON SW
MS LVL ADJ.
VOL
FM FRONTEND
BPF201
GFWB1
FM IF ADJ
FM VT ADJ
FM OSC
AM/FM SW
TU SW
RF AMP
MD/ST.SW
VCO ADJ
AM-TR ADJ.
AM IF ADJ
SET
S607
MENU
S601
STOP
S602
PLAY
S603
FF
S604
REW
S605
BAND
S606
TUNING
S611
HOLD
S610
ON
OFF
(TIM SW)
S608
C-SW
S609
L.V.STOP
SHORT:10.70
OPEN:10.75
LCD601
MONO ON
PRESET
AM12 +8
188.88
KHZ MHZ
ON NORHI ON
NB-5G
RECHARGEABLE
NI-CD (1.2V)
ÐC JACK
BATT
SUM-3 X1
1.5V
M1
MORTOR
J101
SIGNAL
⇨ : FM
➡ : AM/PB
VOLTAGE
NO MARK : AM/PB
( ) : FM


S607
PHARSE
S601
MENU
RECHARGEABLE BATTERY NB5
S604
FF
S602
RADIO OFF
S603
REPEAT
S605
REW
S606
RADIO ON /BAND
LED161
OPE/BATT
S608
HOLD
J101
MICON VDD
SCLK(REM)
SDATA(REM)
EL GND
REMOTE
M 1
(TAPE MOTOR)
COM W V U
M 1
IC401
IC602
IC201
IC701
IC101
X401
S609
(C-SW)
S610
(TIMING SW)
BLK
RED
TO/FROM
BOX,BATT ASSY
TO/FROM
HEAD FLEX C.B
B P.P C.B
(CONDUCTOR SIDE)
TO/FROM MAIN C.B
(COMPONENT SIDE)
A MAIN C.B
(CONDUCTOR SIDE)

ELECTRICAL ADJUSTMENT



IF RANK ADJUSTMENT LAND

A RANK 10.7MHz	SHORT
E RANK 10.75MHz	OPEN

1. Tape Speed Adjustment
   Settings:
Tape selector:	Normal
REVERSE MODE:	⇄
VOLUME POSITION:	MAX
HEADPHONE LOAD:	32
DSL:	OFF
Output point:	Headphone jack
Test tape:	TTA-100
Adjustment location:	SFR401
Power supply voltage:	+1.5V

   Method: Playback the test tape (in the FWD mode), and adjust SFR401 so that the playback frequency is 3015±10Hz. Confirm that the playback frequency is 3015±50Hz in the REV mode.

2. FM VT Adjustment
   Settings:
   - Test point: TP1
   - Adjustment location: L201

   Method: Set to FM 87.5MHz and adjust L201 so that the test point becomes 4.0±0.1V.

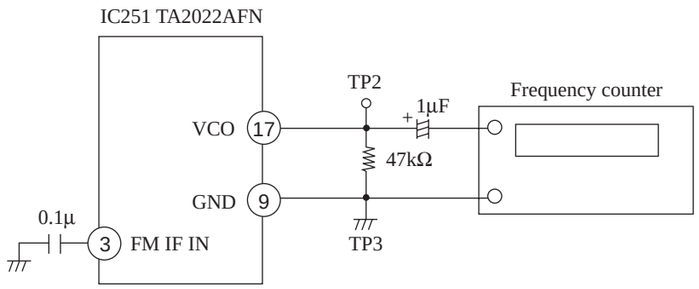
3. AM IF Adjustment
   Settings:
   - Test point: J101
   - Adjustment location:
     L253 ..... 450kHz

4. FM IF Adjustment
   Settings:
   - Test point: J101
     TC202 ..... 10.7MHz

5. AM Tracking Adjustment
   L251 ..... 630kHz
   TC251 ..... 1440kHz

6. FM Tracking Adjustment
   L202 ..... 87.5MHz

7. VCO Adjustment



Settings: Adjustment location: SFR251
Method: Adjust the SFR251 so that the frequency is 19kHz±100Hz on the frequency counter.

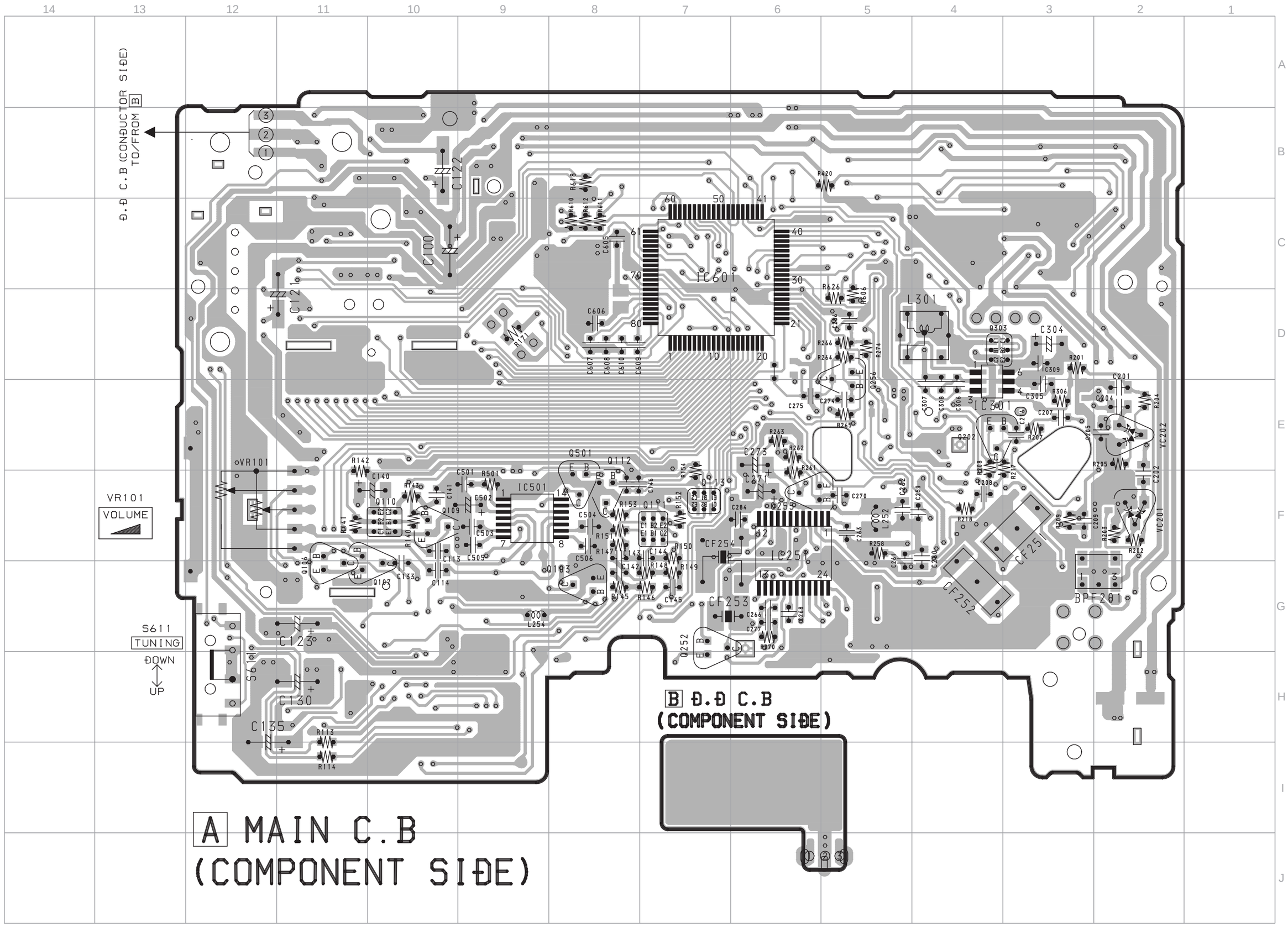
PRACTICAL SERVICE FIGURE

<AM SECTION>

Sensitivity:	Less than 59dB (630kHz)
(S/N 10dB)	Less than 58dB (999/1404kHz)
S/N ratio:	More than 26dB (630kHz)
(Input 74dB)	More than 27dB (999kHz)
	More than 28dB (1440kHz)
Distortion (400Hz):	Less than 3% (999kHz)
Auto stop level:	53-67dB (999kHz)
Intermediate frequency:	450kHz

<FM SECTION>

IHF Sensitivity:	Less than 16dB
(THD 3%)	(76.0/90.0/108.0MHz)
Signal to noise ratio:	Less than 43dB
(Input 54dB)	(76.0/90.0/108.0MHz)
Distortion (Input 54dB):	Less than 3.0% (98.0MHz)
Auto stop level:	18±4dB (83.0MHz)
Separation:	More than 23dB (98.0MHz)
Intermediate frequency:	10.7MHz
Tape speed:	3015Hz±50Hz
Wow & flutter:	Less than 0.52% (RMS)
Take-up torque:	20-30g-cm (FWD, REV)
F.F torque:	70-150g-cm
Rew torque:	70-150g-cm
Back tension:	1-3g-cm (FWD, REV)
S/N ratio:	More than 42dB
Distortion:	Less than 3.0%
Noise level:	Less than 3.0mV (MAX)
	Less than 0.3mV (MIN)


Đ.Đ C.B (CONDUCTOR SIĐE)
TO/FROM B
VR101
VOLUME
S611
TUNING
ĐOWN
UP
B Đ.Đ C.B
(COMPONENT SIĐE)
A MAIN C.B
(COMPONENT SIĐE)
IC601
IC501
IC301
IC251
Q501
Q112
Q113
Q191
Q103
Q106
Q107
Q110
Q109
Q252
Q303
Q256
Q202
Q259
L301
L252
L254
BPF201
CF251
CF252
CF253
CF254
VC201
VC202
C100
C121
C122
C123
C130
C135
C140
C141
C501
C502
C503
C504
C505
C506
C605
C606
C607
C608
C609
C610
C113
C114
C133
C142
C143
C144
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C149
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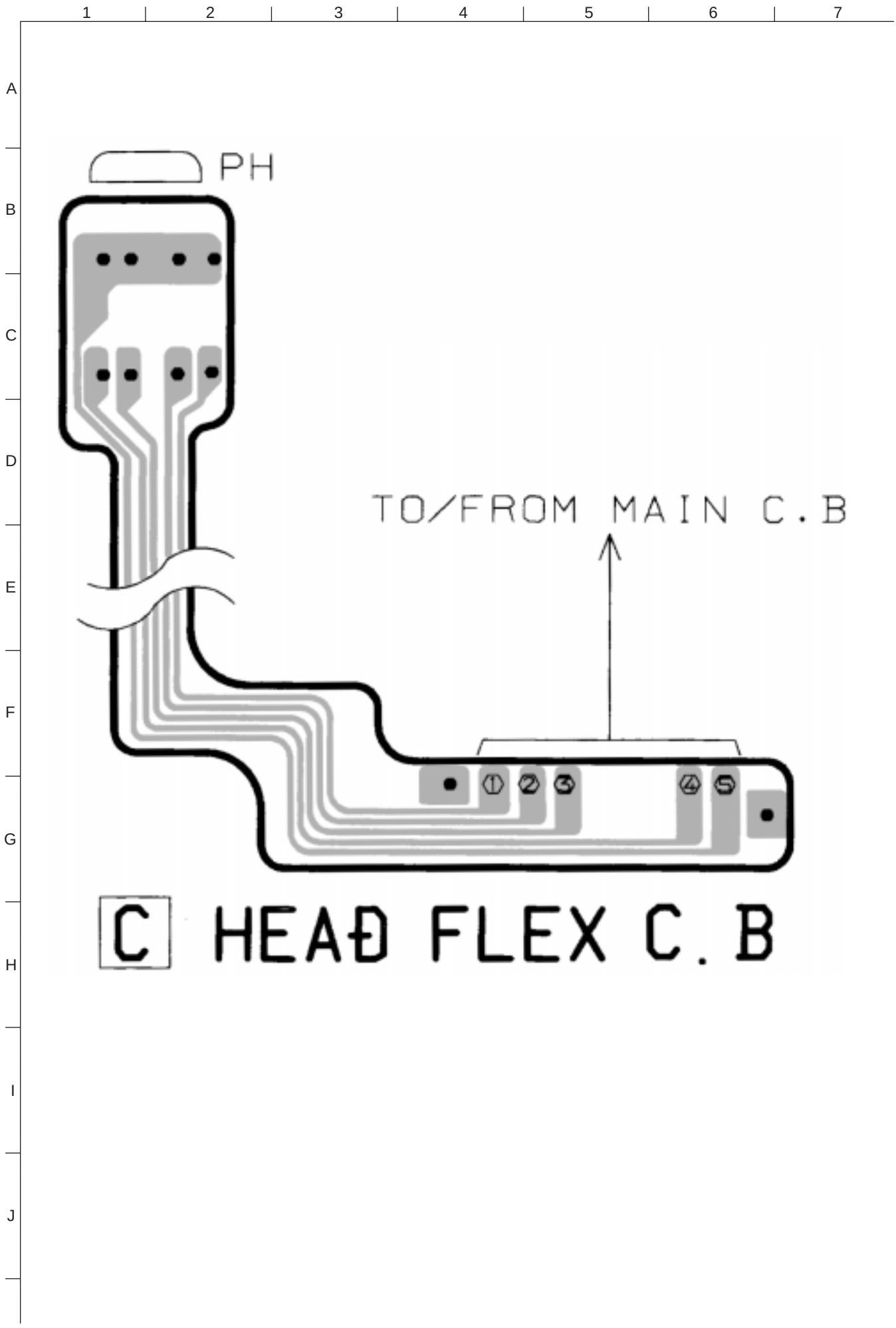
C167
C168
C169
C170
C171
C172
C173
C174
C175
C176
C177
C178
C179
C180
C181

IC DESCRIPTION

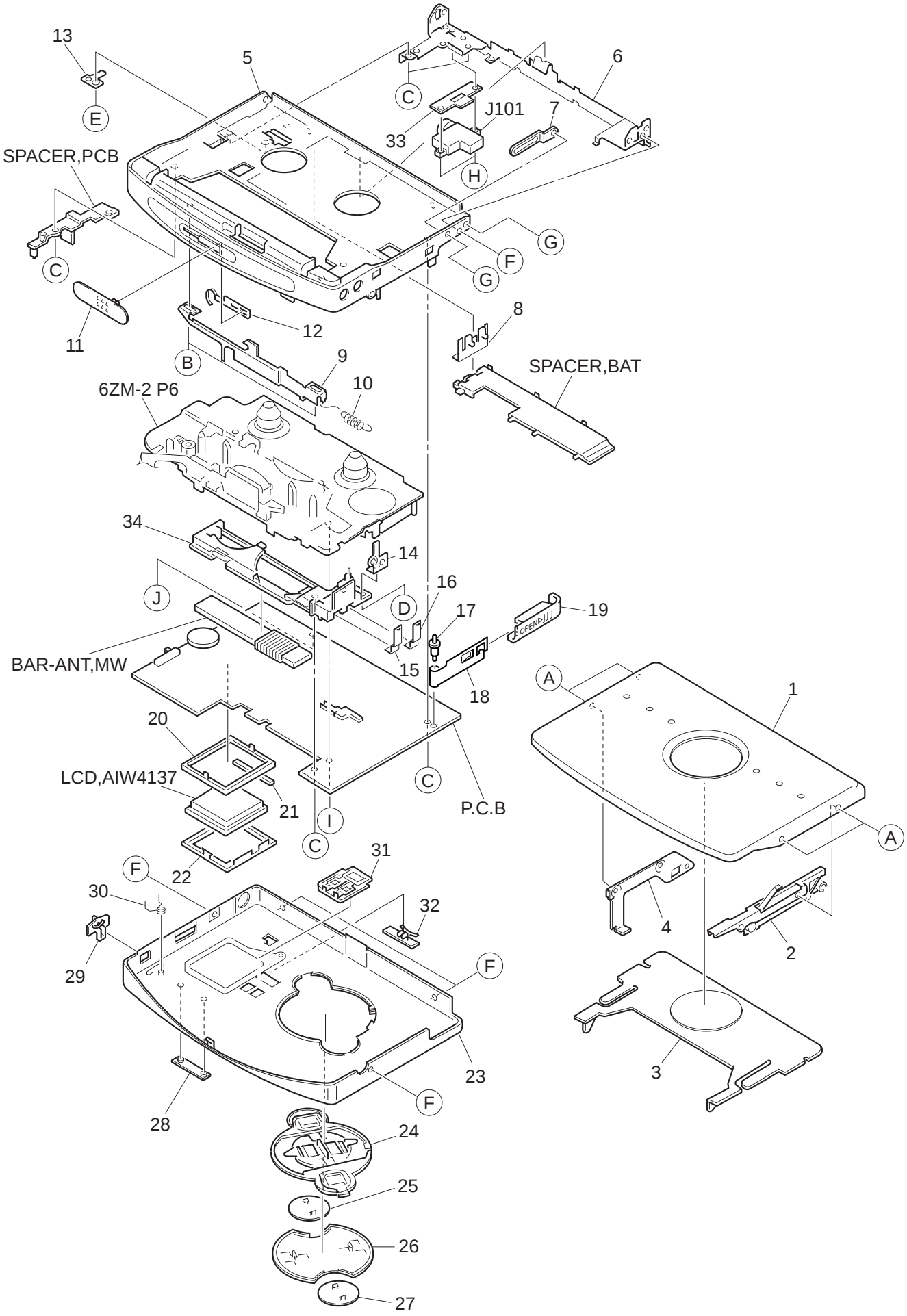
IC, TC9327F-017

Pin No.	Pin Name	I/O	Description
1-4	COM1-COM4	O	LCD driver, common.
5-20	S1-S16	O	LCD driver, output.
21	A-SET1	I	L ┬ J area L ┘ L ┬ U H ┘ H ┬ E L ┘ H ┬ H area H ┘
22	A-SET2	I	
23	IF10.7	I	H: IF10.75
24	FA CH	I	H: Test mode is set. L: normal operation.
25	Rec ENA	I	H: Recording operation is enabled. L: Recording operation is disabled.
26	DOLBY ENA	I	H: Supporting DOLBY. L: Not supporting DOLBY.
27	F.RecP	I	H: Transition to F. REC is enabled. L: Disabled.
28	R.RecP	I	H: Transition to R. REC is enabled. L: Disabled.
29	MS IN	I	H: Blank. L: Music exists.
30	TIM SW	I	Mechanism operation detection input terminal.
31	MOT CH	I	MOT start-up detection input terminal.
32	L.V.STOP	I	Low-voltage mechanism stop, key input segment input.
33	HOLD	I	H: HOLD OFF. L: ON.
34	UP	I	H: UP key ON. L: OFF.
35	DOWN	I	H: DOWN key ON. L: OFF.
36	ENTER	I	H: ENTER key ON. L: OFF.
37	C-SW	I	H: C-switch OFF. L: ON.
38	MOT ON	O	H: Motor ON. L: Motor OFF.
39	MOT HI	O	H: High speed. L: Normal.
40	MOT DIR	O	H: Motor clockwise. L: Motor counter-clockwise.
41	BRAKE	O	H: Motor brake ON. L: OFF.
42	REMOTE	I	Remote control key input terminal.
43	MAIN	I	Main key input terminal.
44	FM OUT	O	H: FM mode. L: Other modes than FM.
45	AM OUT	O	H: AM mode. L: Other modes than AM.
46	JACK IN	I	H: Jack OFF. L: Jack IN.
47	SDATA REM	O	Remote control display data output terminal.
48	SCK REM	I	Serial clock input terminal.
49	BUZR	O	Buzzer output terminal.
50	FM-ST OUT	O	FM MONO/ST selection output terminal.
51	FWD.REC.ON	O	H: F. REC mode. L: Others.
52	REV.REC.ON	O	H: R. REC mode. L: Others.
53	REC ON	O	H: REC mode. L: Others.
54	F/R CTL	O	H: Mechanism is in the forward mode. L: Reverse.
55	S-BASS OUT	O	S-BASS ON/OFF output terminal.
56	DOLBY OUT	O	DOLBY ON/OFF setting output terminal.
57	70/120	O	70/120 selector output terminal.
58	CS	O	EEPROM R/W selection terminal.
59	SCK EEPROM	O	EEPROM serial clock output terminal.

Pin No.	Pin Name	I/O	Description
60	SDATA EEPROM	I/O	EEPROM data input/output terminal.
61	BIAS MUTE	O	H: Record mute ON. L: OFF.
62	MUTE	O	H: Mute ON. L: OFF.
63	NC	—	N.C.
64	IFIN	I	IF signal input terminal.
65	TU OUT	O	H: TU mode. L: Other modes than TU.
66	PLL OUT	O	Phase comparator output terminal.
67	P-SNSR	I	P-SNSR output waveform input terminal.
68	POW ON	O	H: Power ON. L: Power OFF.
69	GND	—	GND.
70	FM IN	I	FM programmable counter input.
71	AM IN	I	AM programmable counter input.
72	VDD	—	Power supply terminal.
73	RESET	I	Reset input terminal.
74	XOUT	O	Crystal oscillation connecting terminal.
75	XIN	I	
76	VXT	—	Power supply terminal for LCD drive.
77	V LCD	—	Reference voltage terminal for LCD drive.
78	C1	—	
79	C2	—	
80	VEE	—	1.5 V regulated power supply for LCD drive.


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
PH
TO/FROM MAIN C.B
①
②
③
④
⑤
C HEAD FLEX C.B

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

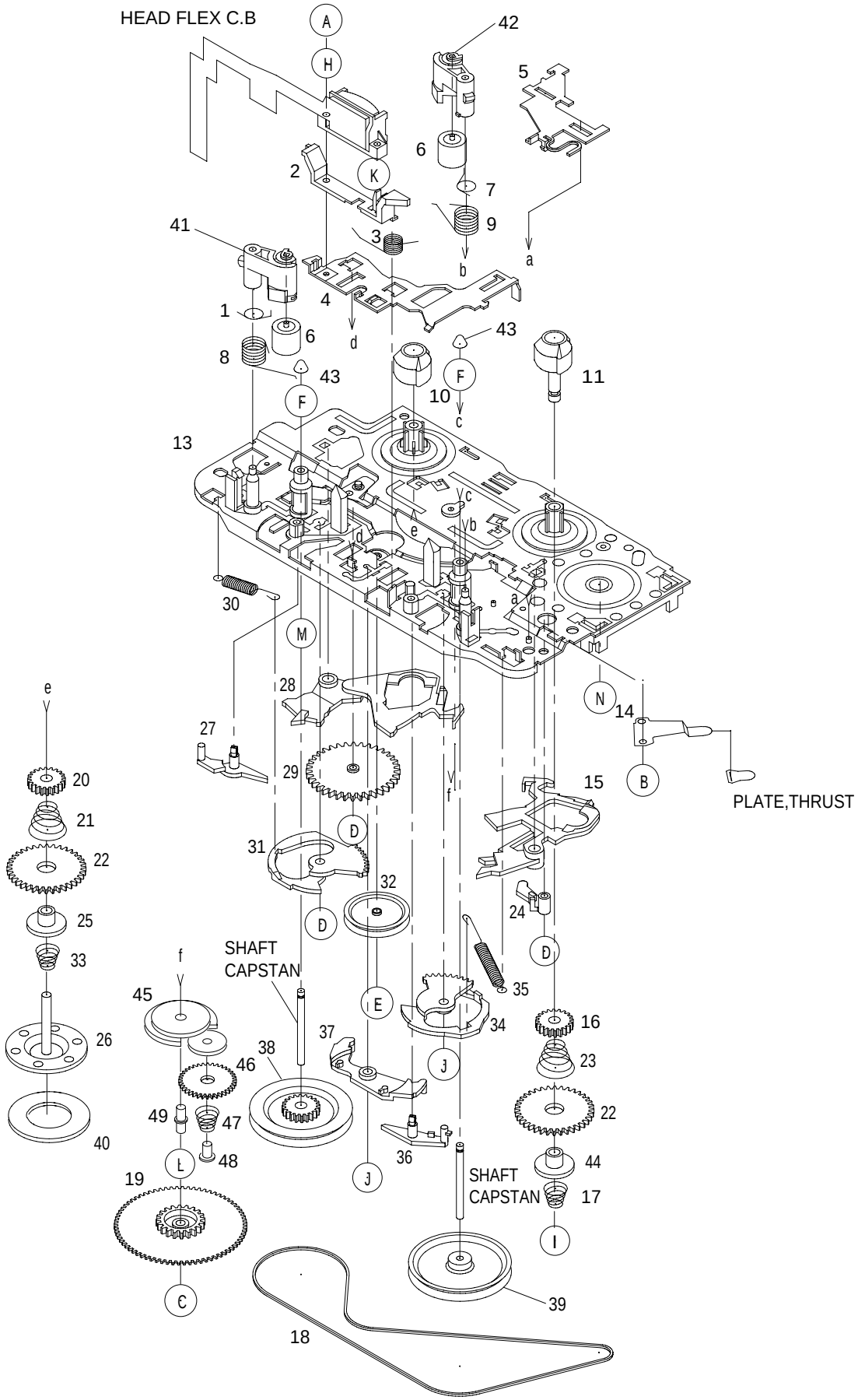
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	88-HR3-012-010		LID ASSY,CASS SIL D
2	88-HK5-202-010		HLDR ASSY,CASS L
3	88-HK5-005-010		WINDOW,CASS
4	88-HK5-207-010		HLDR,CASS R
5	88-HR5-022-010		FRAME,CENTER SIL
6	88-HR3-201-010		PLATE ASSY,HINGE
7	88-HK5-208-010		ARM,SLIDE
8	88-HR5-210-010		BAT-CONTACT,M
9	88-HK5-212-010		LEVER,OPEN
10	88-HK5-227-010		SPR-E,EJECT
11	88-HK5-015-010		KNOB,SL OPEN
12	88-HK5-213-010		PLATE,OPEN
13	88-HK5-220-010		SPR-P,MECHA EARTH
14	88-HR5-203-010		NUT, B-BOX
15	88-HR5-208-010		BAT-CONTACT,B-BOX M
16	88-HR5-207-010		BAT-CONTACT,B-BOX P
17	88-HR5-209-010		SHAFT,BAT
18	88-HK5-214-010		BAT-CONTACT,P
19	88-HR5-023-010		LID,BATT SIL
20	88-HR5-217-010		BASE,LCD
21	88-HR5-206-010		JOINT,LCD
22	88-HR5-216-010		HLDR,LCD
23	88-HR3-010-010		CABI ASSY,REAR SIL D
24	88-HR5-016-010		PANEL,KEY SIL
25	88-HR5-010-010		KEY,REW
26	88-HR5-008-010		KEY,PLAY-STOP
27	88-HR5-009-010		KEY,FF
28	87-054-085-010		BADGE,AIWA 22.5 MLD
29	88-HR5-017-010		KNOB,SL TUN SIL
30	85-HR2-230-010		SPR-T,TUN N
31	88-HR5-011-010		KEY,BAND
32	88-HR5-013-010		KNOB,SL HOLD
33	88-HK3-201-010		SPACER,JACK
34	88-HR5-204-010		HLDR,ANT
A	87-HK5-237-010		S-SCREW,1.4-2 CR NL
B	87-HK5-235-010		S-SCREW,1.4-0.6-2.5
C	87-067-527-010		SCREW,VT+1.4-2.5(B)
D	87-262-505-310		SCREW, V+1.4-2.5
E	88-HK5-228-010		S-SCREW,+1.4-2 CR
F	87-HK5-236-010		S-SCREW,1.4-2.3
G	87-HK5-240-010		S-SCREW,1.4-1 CR NL
H	87-078-079-010		V+1.4-4.7CRN
I	87-078-113-010		S-SCRW,+1.4-3.5 HL(B
J	87-067-746-010		SCREW,M 1.4-2(H0.5)

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
N	Gold	P	Pink	R	Red
S	Silver	ST	Titan Silver	T	Brown
V	Violet	W	White	Y	Yellow

TAPE MECHANISM EXPLODED VIEW 1/1

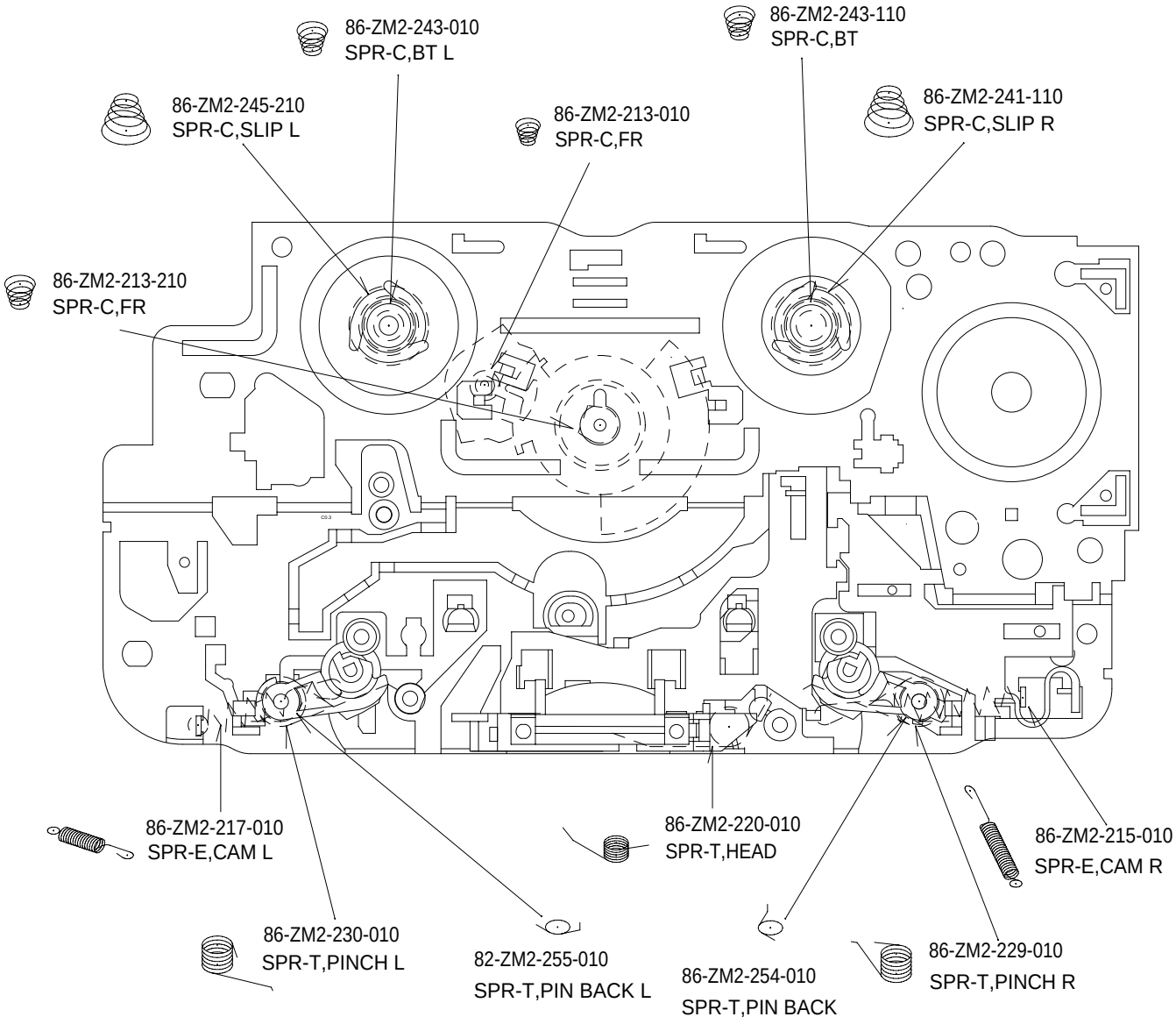


TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	86-ZM2-255-010		SPR-T,PIN BACK L
2	86-ZM2-252-010		GUIDE,TAPE
3	86-ZM2-220-010		SPR-T,HEAD
4	86-ZM2-219-010		LEVER,HEAD
5	86-ZM2-247-010		LEVER,MS
6	86-ZM2-226-010		ROLLER ASSY,PINCH
7	86-ZM2-254-010		SPR-T,PIN BACK
8	86-ZM2-230-010		SPR-T,PINCH L
9	86-ZM2-229-010		SPR-T,PINCH R
10	86-ZM2-240-010		CAP,REEL
11	86-ZM2-234-010		SHAFT,REEL R
13	86-ZM2-332-010		CHAS ASSY,P6
14	86-ZS2-312-010		SPR-P,6A-MOT
15	86-ZM2-232-010		LEVER,REEL R
16	86-ZM2-258-210		GEAR,REW
17	86-ZM2-243-110		SPR-C,BT
18	86-ZM2-249-010		BELT
19	86-ZM2-209-010		GEAR,B
20	86-ZM2-238-010		GEAR,FF REW
21	86-ZM2-245-210		SPR-C,SLIP L
22	86-ZM2-237-010		GEAR,PLAY
23	86-ZM2-241-110		SPR-C,SLIP R
24	86-ZM2-272-010		LEVER,SW P 8.4
25	86-ZM2-236-010		CAP,SLIP
26	86-ZM2-235-010		SHAFT,REEL L
27	86-ZM2-223-010		LEVER,PIN UP L
28	86-ZM2-233-010		LEVER,REEL L
29	86-ZM2-208-010		GEAR,A
30	86-ZM2-217-010		SPR-E,CAM L
31	86-ZM2-216-010		LEVER,CAM L
32	86-ZM2-276-010		PULLEY,COUPLER
33	86-ZM2-243-010		SPR-C,BT L
34	86-ZM2-214-010		LEVER,CAM R
35	86-ZM2-215-010		SPR-E,CAM R
36	86-ZM2-222-010		LEVER,PIN UP R
37	86-ZM2-218-010		LEVER,HEAD UP
38	86-ZM2-205-010		FLY-WHL,L
39	86-ZM2-204-010		FLY-WHL,R
40	86-ZM2-282-010		SH,AUTO 2
41	86-ZM2-225-310		ARM,PINCH L
42	86-ZM2-224-210		ARM,PINCH R
43	86-ZM2-283-010		CAP,SHAFT
44	86-ZM2-275-110		CAP,SLIP R
45	86-ZM2-210-310		LEVER,FR
46	86-ZM2-211-010		GEAR,FR
47	86-ZM2-213-210		SPR-C,FR
48	86-ZM2-212-210		SHAFT,FR
49	86-ZM2-251-110		SHAFT,GEAR B
A	87-262-511-310		V+1.4-5 BLK
B	87-067-430-010		VT2+1.4-5 SWCH/CR BLK HL
C	87-067-516-010		W-P,1.58-3-0.25 SLIT
D	87-067-860-010		W-P,0.95-3-0.4
E	86-ZM2-277-010		W-P,0.8-3-0.2 SLT
F	86-ZM2-269-110		SH,1.2-2.9-0.25 SL
H	86-ZM2-298-010		W-L,1.47-2.4-0.25
I	86-ZM2-278-010		W-P,1.36-4-0.2 SLT
J	86-ZM2-319-010		W-L,0.95-3-0.35
K	86-ZM2-318-010		W-L,1.5-2.5-0.05 RED
L	86-ZM2-317-010		W-L,2.12-4.5-0.075 BLE
M	86-ZM2-313-010		W-P,1.76-4-0.13
N	87-067-815-110		VT+1.4-3

SPRING APPLICATION POSITION



ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	88-HR3-901-010		IB,EC
2	87-B30-038-010		BAT,NB-5G
3	88-HK5-952-010		BOX,BAT ASSY SIL
4	82-HK3-951-010		CARRYING,CASE
⚠ 5	87-B30-137-110		CHARGER,RB-107 H
6	87-B30-122-010		HEADPHONE,HP-M023
7	88-HR3-951-010		RC UNIT,RC838

サービス技術ニュース	
番号	連絡内容
G一　一	
G一　一	
G一　一	

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